DOCUMENT RESUME

ED 201 552 SO 013 295

AUTHOR Iverson, Barbara K.
TITLE Haha, Aha, Ah: A Model for Playful Curricular Inquiry and Evaluation.
PUB DATE 81
NOTE 30p.; Paper presented at Annual Meeting of the American Educational Research Association (Los Angeles, CA, 1981). Some pages may not reproduce clearly from EDRS in microfiche due to fading ink throughout original document.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Classroom Environment; Classroom Observation Techniques; Creative Thinking; *Creativity; *Educational Needs; Elementary Secondary Education; Humor; *Play; *Teaching Methods

ABSTRACT

This paper discusses playfulness and creativity and draws educational implications. The suggestions in the paper are intended to provide a rationale for incorporating foolish interludes, humor, flexibility, and the playful side of human nature into classrooms to stimulate creative thinking in young people today. Play is described as a mode of being or a way of looking at the world. The biological side of play is first briefly explored. Researchers have observed that playing tends to provide strong motivation and to reduce frustration among those who are learning or doing something. Because our society is one in which change is rapid and pervasive, schools need to deal with the way in which individuals create adaptive strategies in response to their environment. The research of ethnologists suggests that play is one mechanism for developing adaptive strategies, as well as being an integral part of the creative process. The paper examines the link between play, playful outlook, and creativity. Manifestations of creativity in humor, science, and art are discussed. Four states of creativity are proposed (the preparation, incubation, illumination, and verification stages). The role of play in these four stages is discussed. In order to examine play and playfulness in classrooms, observations of five suburban, racially and sexually integrated classes were conducted. A kindergarten, first, fifth, sixth grades and a reading lab were each observed for one full day. Techniques used to evaluate the playfulness of these classrooms are discussed. Interspersed through this discussion are comments about the observations made. For example, by looking around the room, an observer can note much about playful or serious nature of the classroom. Most teachers have admonitions, in the form of posters or bulletin boards, posted in the classroom. "Be Quiet, Be Neat, Work at Your Seat" are some examples which were observed in the five classrooms. Other phenomena studied include observations of facial expressions, patterns of student congregation, and the kinds of classroom activities in which students are involved. (Author/RM)

ED201552

BEST COPY AVAILABLE

MAY

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

BARBARA IVERSON

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Haha, Aha, Ah: A Model for Playful Curricular Inquiry and Evaluation

Barbara K. Iverson
University of Illinois at Chicago Circle
Paper to be presented at AERA Annual Conference
Los Angeles, 1981

SO 013 295

This paper explores play and creativity as subjects of and as a model for curricular inquiry and evaluation. Play, as presented in diverse sources, is described as a mode of being, or a way of looking at the world, as it has no simple definition (Koestler, 1978; Bruner, 1976; Vandenberg, 1979; Millar, 1974; Webb & Weick, 1979; March & Cohen, 1976; Feyerabend, 1975, etc.). The relationship of play and creativity in humor, science and art is discussed, and some educational implications drawn. A model of playful curricular inquiry and evaluation is presented and then illustrated through a discussion of the observations of five classrooms. Some conclusions regarding creativity, playfulness and their existence or nonexistence in classrooms are made, based on the observations.

Ontology of Play

Play is not readily definable, yet it has been widely discussed as an element of art, a basic human impulse like the impulse to form, a behavioral competitor to reason, as connected to religious and sacred impulses and as a form of transformation or representational activity (Schiller, 1902; Marcuse, 1955; March, 1976; Gadamer, 1976 & Huizinga, 1955). Play is paradoxically serious and "...fulfills its purpose only if the player loses himself in his play." (Gadamer, 1976, p. 92). Play is presented as a representing activity in this sense, insofar as the player becomes engrossed in the play, and is thus transformed

(represented) in playing. The point here, is that play is not an object, nor an activity like other activities such as raking leaves, painting, or driving a car. Play is not synonomous with 'game' nor with the the content of the game. Play is a mode of being; a way of approaching the world, in the same way that a rational outlook is a mode of being or a way of approaching the world. An exact definition of play is impossible to give, in the same manner that defining what it is 'to be' is unspecifiable in a precise way. Thus, a playful outlook will refer to this unique perspective throughout the paper. To better understand this perspective, the biological side of play will be briefly explored in the next section of the paper.

Research on play has explored the presence and manifestations of play in animal species other than man, in order to more clearly delineate what play is. Its been found that all animals play , though some species to a greater extent than others. In ethological studies where animals are observed in their environments, play has been explored in terms of when it occurs, between which individuals, and with what frequency it occurs. This research has attempted to describe some universals of play which appear in all species, however uniquely manifested (Vandenberg, 1979). One of these discoveries is that play is a form of 'meta-communication', or a communication about a communication. Normally, if one individual strikes another individual, it is a serious action which elicits some instinctual re-

sponse (e.g. fight or flight response). However, if the aggressor has signified "this is play" (a feature of play found to preceed play in all species) then an activity which has a meaning in itself (the blow) acquires an additional intentional and representational meaning. The literal meaning of the action is reevaluated and reinterpreted in light of the fact that there has been a meta-communication about it which has altered the correct interpretation of the action (Vandenberg, 1979). The action is no longer interpreted as a threat, it is play. The actors will be likely to commence an interlude of play. If the spirit of play is lost, the action loses its representational meaning and reverts to its literal meaning, becoming serious. The actors who began to play-fight, hurt one another, and so end up really fighting. Thus, three universals of play are: it is preceeded by a sign, such as the "play face" noted in chimpanzees (Millar, 1974); it is intentional and it is representational.

Vandenberg (1979) suggests that a relationship exists between the complexity of play observed in a species and its ability to engage in complex cognition, such as means-end or symbolic, representational thinking. He argues that complex cognitive abilities are associated with complex forms of play. It has been noted that the greater the cognitive complexity in a species, the fewer instinctive adaptive strategies exhibited by the species. Researchers who consider play in terms of its species importance, have found no apparent, immediate use value

of play. Thus, play as a complex phenomena is associated with complex cognitive functioning in an abstract and complex way. Species which have simpler cognitive abilities have more "wired in" responses to their environment. It has been hypothesized that in species with fewer of the instinctual adaptive behaviors, and hence more complicated cognitive abilities, play is one way that new routines or behaviors are developed. When an individual encounters something new in its environment, to which it has no instinctive, wired-in response, play can be an vehicle of exploration and discovery which is safe and noncommital. More can be discovered about a novel phenomena by free play than through a prescribed or pregoverned routine. The process by which this occurs has been called the exploration-play-application sequence (Vandenberg, 1979) because the new phenomena is first cautiously explored, then played with (a form of experimentation), and as confidence and knowledge about the phenomomena grows, the individual applies what it has learned in making use of the object or phenomena. A theatrical example of this, is the sequence in Kubrick's 2001 where the ape goes from toying with the bone to using it as a cudgel-like weapon.

Value of Play

The value of this process is suggested by research findings regarding children's performance of tasks. Play occurs between an individual and the environment as easily as it occurs between

two individuals. In an experiment with young children, one group of children was taught a task by a lecture type, didactic strategy. Another group received no instruction. A third group was allowed to play with the implements used to carry out the task, but was given no directions or lessons. The task consisted of fishing a prize out of a latched box which was out of reach. The children needed to use an implement made by clamping two sticks together. The results are presented in Table 1.

INSERT TABLE 1 ABOUT HERE

The children who were allowed to play did as well as the group who received a demonstration and instruction (Bruner, 1976). An unanticipated outcome of the experiment involved the observation that the group of children who were 'playing' stuck with the task longer than those children who were 'working' on a task. Other researchers have observed that playing tends to provide strong motivation as well reduce frustration among those who are learning or doing something (Bruner, 1976).

In a technical-rational society such as ours (discussed at length elsewhere e.g. Marcuse, 1955; Bowers, 1978, 1979) where change is rapid and pervasive, the goals and the tools of schooling need to address issues such as the recurrent obsolescence of facts, and the kind of adaptive strategies required by members of the society. What are the purposes of schooling in such

in such a society? Not only the day-to-day short-term processes, but the long-term purposes? If one of the long-term purposes is to prepare children for the work of their life or for life in general, in a society in which change is rapid and pervasive, children need an open-mindedness, a flexibility and an ability to synthesize diverse information in novel ways in order to accomodate shifts and changes in the larger society. In other words, schools need to deal with the way in which individuals create adaptive strategies in response to their environment. Play, as the ethologists' research suggests, is one mechanism for developing adaptive strategies, as well as being an integral part of the creative process. This is a process which is increasingly necessary but also increasingly hard to anticipate in concrete detail in the technical-rational society. The following question raised by Feyerabend (1975) points to the dilemma faced by such a society which must find a balance between complex structures and adapatability to changes:

> Progressive educators have always tried to develop the individuality of their pupils and to bring to fruition the particular, and sometimes quite unique talents and beliefs that a child possesses. Such an education, however, has very often seemed to be a futile exercise in day-dreaming. For is it not necessary to prepare the young for life as it actually is ? (p. 52)

We can train people to follow procedures or algorithms as is done to a great extent in schools today. Rules are presented, learned by association, and then applied to specific situations. This represents the technocratic mentality. It has a place in schools. However, in a society where algorithms are rendered

obsolete by technological developments frequently and almost ceaselessly, how do we teach people to produce a new routine or algorithm? A playful spirit or approach to problems is really the key to this kind of thinking and to the ability to take things that were useful but are no longer, and to come up with a new element which can be used in a novel situtation. As March (1976, p. 77) says, "Playfulness is the deliberate, temporary relaxation of rules in order to explore the possibilities of alternative rules." While recognizing reason, playfulness allows experimentation with the caveat that the play will terminate or that it will be integrated at some point, into the "structure of intelligence" (March, 1976). The aim of schools should be to incorporate strategies and structures to encourage 'playful' as well as 'serious' thinking. Play is rule-governed, but in contrast to games which are governed by extrinsic, nomothetic rules, the rules of play are largely idiographic (Allport, 1951). Consider these two situations observed in different classrooms, in the first, a teacher brings out the game 'Probe', a board game involving reasoning, word attack and spelling skills, allowing a group of children to play it. In the second, children have free time and develop a game around a structure they have built out of wooden blocks. They say the structure is a train, and proceed to play. In the first case, the game had nomothetic rules while in the second case, the game had idiographic rules. Schools accommodate nomothetic play, as in games such as baseball, very easily. This kind of play is easily fit into the curriculum, as in

a gym class. Children are taught the rules of the game, practice the requisite skills of the game, and then apply this knowledge in playing the game. I think that children themselves would draw a distinction between this kind of 'playing a game', and 'playing'. Schools recognize the legitimacy of structured play with nomothetic rules. Schools squelch idiographic play owing to a cultural heritage which attributed guilt to play, and put play in opposition to work, as though the two were mutually exclusive and dichotomous. In the short run, such a valuing might make sense insofar as it will seem more efficient (one of the central, unquestioned core values of a technical-rational society) to exclude play from the "work" of the school. But in terms of long-term purposes, such as fostering creativity in adults, such a narrow view of play and the exclusion of free play from schools is counter-productive. Associational thinking and work that develops this kind of linear, logical thought occupies most of the school day, even in kindergarten in schools today (see descriptions of the classes observed for more detail). Students spend time copying, listening, filling in blanks, finding specific 'right' answers to teachers' questions. In one classroom, the students were repeatedly admonished to "get to work" . The teacher is a benevolent manager; firm but kind, whose job is to keep students busy at a series of tasks. The tasks do not originate from the children, but are imposed on them.

Play and Creativity

In order to further make the case for the play and the playful, the link between play, playful outlook and creativity will be examined briefly, relying heavily on the work of Arthur Koestler (1978) and others (Stein & Heinze, 1964, etc.). Four overlapping, non-discrete stages of creativity are commonly described: the preparation stage, the incubation stage, the illumination stage and the verification stage (Stein & Heinze, 1964; Hutchinson, 1949; Wallas, 1926). Further, the distinction between associational and bisociational thought proposed by Koestler (1978) is useful to this line of inquiry. Associational thinking refers to the linear progression of thinking from idea to idea, in sequence; to "...routines of disciplined thinking within a single universe of discourse (Koester, 1978). Bisociation refers not to pure inspiration, but to the juxtaposition of several familar ideas into a creative amalgam; into a new idea or point of view (Koestler, 1978). Bisociation is perceiving a situation or idea in two self-consistent yet different associative contexts. Figure 1 shows manifestations of creativity in humor (HaHa), science (Aha), and art (Ah). These three domains lie on a continuum of creativity which is self-asserting at one extreme and self-transcending at the other (Koester, 1978). This analysis of creative thinking will be summarized briefly, but interested readers would be well-advised to see the oringinal source for development of the ideas in detail. Basically, the

creative act is bisociative, "...it consists in combining previously unrelated mental structures in such a way that you get more out of the emergent whole than you have put in." (p. 131). This is possible because the parts (ideas) are not simply added together but relations between parts (ideas) are synthesized into new patterns. If the associative contexts (or frames of reference as they may be called) one combines are incompatible, the clash may be humorous. In Figure 2, the combination of the two statements: "The new illiteracy is not a failure of education" and "It is a pragmatic adjustment to the new poverty", surprise us and trigger a humorous response (smile, laugh, slight curling of the lip) because we do not expect failure to be considered success nor pragmatism to mean callousness. At another level of humor, we may well accept the cynical truth of the cartoon, that illiteracy is a deliberate strategy for dealing with a decreasing job market, but we do not expect a businessman to admit or espouse it openly, especially to a school child.

In the case of creativity in science, combining X with Y yields the 'Eureka' of Archimedes (Aha), not the explosive 'Haha' of humor. A historical example of the combination of two well-known associative contexts into a novel bisociated context are given by Koestler. For example,the movement of the tides was well-known to man, as were the lunar cycles. However, it took Kepler to connect the two phenomena, giving rise to modern astronomy. Where the humorist uses bisociation to produce a

collision of ideas to generate laughter, the scientist aims at the integration of unrelated ideas. "... witticism is paradox stated, discovery is paradox resolved." (p. 133).

Creativity in humor is aggressive; laughter an explosion of the self, outward. In scientific creativity, the aggressive tendency is aimed at the outer world; the Aha of discovery, a manifestation of the urge to explore and understand, is self-satisfying. It lies between the aggressive extreme of malice and the self-transcendence of the artist creator. In artistic creativity, "(T)he artist, as the scientist, is engaged in projecting his vision of reality into a particular medium, whether the medium is paint, marble, or words, or mathematical equations." (p. 142). The artistic product, is the mundane rendered in a new light, the hidden connection exposed; a shift in attention which allows new aspects of reality to be perceived. The artist transcends self in the 'Ah' experience.

With this framework, or triptych, of creativity, Koestler has illuminated the connections between creative thought in several domains of human endeavor. The processes of creativity are similar, it is the motivation and methods of the creator which give rise to the false distinction of science vs. art, mind vs. matter, intellect vs. emotion. One further point that he makes is useful as well. In discussing the stages of creativity, he cites the French "reculer pour mieux sauter" which means to

draw back to take a running jump. It seems that in the creative process, the incubation stage is the one in which one's mind draws back to take a running jump. This appears to be a ubiquitous aspect of the creative process. Yet, in schools, how often is this stage of creativity fostered, discussed or even acknowledged? The thoughtful, day-dreaming stage of thinking is actively discouraged in most classrooms today. As Feyerabend notes of modern science education today,

> It simplifies 'science' by simplifying its participants: first, a domain of research is defined. The domain is separated from the rest of history (physics, for example, is separted from metaphysics and from theology) and given a 'logic' of its own. A thorough training in such a 'logic' then conditions those working in the domain; it makes their actions more uniform and it freezes large parts of the historical process as well. Stable 'facts' arise and persevere despite the vicissitudes of history. An essential part of the training that makes such facts appear consists in the attempt to inhibit intuitions that might lead to a blurring of boundaries. A person's religion, for example, or his metaphysics, or his sense of humor (his natural sense of humor and not the inbred and always rather nasty kind of jocularity one finds in specialized professions) must not have the slightest connection with his scientific activity. His imagination is restrained, and even his language ceases to be his own. This is again reflected in the nature of scientific 'facts' which are experienced as being independent of opinion, belief, and cultural background.

The description of the narrowing effect of modern science education fits much of school education in general. It is typical of the technocratic-rational approach to seek to deal with a complex and ambiguous issue by redefining or reducing it to a technical problem. Questions of literacy in the broadest sense, are translated into narrower concerns with phonics, word calling and decoding. Concern with unequal distribution of

resources such as food, are reduced to agricultural problems of increasing yield per acre, and not taken up as political or economic (e.g. redistribution of resources) issues (Lappe, 79). In our society students educated to think associatively in applying fixed routines to different versions of old problems; students conditioned by a fixed logic and stable facts may face difficulty in mobilizing creative thinking processes in the face of new problems.

However, pointing up weaknesses in the status quo as well as the necessity, but insufficiency of associational thinking do not provide alternatives. This next section of the paper will describe the method and design of the observations, drawing on both to illustrate the 'state of play' in schools today and to suggest methods for incorporating play and the playful outlook into schools today in an effort to foster creative thinking.

Play, Creativity and Classrooms

In order to examine play and playfulness in classrooms, observations of five suburban, racially and sexually integrated classes were conducted. A kindergarten, first, fifth, sixth grades and a reading lab were each observed for one full day. The written transcripts of the observations focus on activity per unit of time. When the teacher or student(s) initiated a change of activity, the time and prpose were noted by the observer.

Both formal and informal activities were noted, and thus whether the activity shifted because the teacher said "Get out your math books" or because a student began day-dreaming, the shift was noted. These transcripts will be summarized, rather than presented verbatim, as the average length is eleven pages. The information in them is augmented by simple observation and other unobtrusive research techniques (Webb et al., 1969). The purpose of using several modes of observation was to get a picture of what the classroom was like. Playful curricular inquiry (and evaluation) is interested in more than the formal curriculum or prescribed curriculum. It would be difficult to gauge the playfulness of the classroom by looking only at lesson plans . Unobtrusive measures (Webb, et al., 1969) which are nonreactive are valuable in this kind of inquiry. For example, by looking around the room, the observer can note much about the playful or 'serious' nature of the classroom. Most teachers have admonitions, in the form of posters or bulletin boards, posted in the classroom. What do these say? BE NEAT, BE QUIET, WORK AT YOUR SEAT, RAISE YOUR HAND, BE A GOOD LISTENER, FINISH YOUR WORK, etc., are some examples which were observed in the five classrooms. These can give the observer clues as to the tone of the classroom. Student artwork is often observed, as well. Is it original (e.g. each student portrayed what he or she felt like portraying?) or does it seem to be done in response to some specific instruction (draw the Prince's castle)? In search of evidence of playfulness and creativity, the observer also may

look for something which is not drawn or painted, as these are rather trite media, indicating restrictions on free expression or a channeling of creativity into a single dimension. School regulations are often posted, as well, and the observer may be able to sense how constained teachers feel by school policies. If there is a district or system-wide reading program, for example, identical reading progress charts will be posted in every classroom. These were not in evidence in the observed classrooms.

In conducting playful curricular inquiry and evaluation, the observer must use a variety of techniques to gain information. Observing in a classroom all day will reduce the reactivity of the observer's presence. Both students and teachers got used to the observer and settled into their usual activities.

Observations of surroundings can lead to further insights. Observations of expressions is another important aspect of playful curricular inquiry. One looks not only for smiles, but makes a distinction between playful smiles and malicious smiles. In schools, taunting can go on between students as well as pleasant cooperation. It is important to distinguish between play and more aggressive and critical encounters, between students and between teacher and students. Are the teacher's remarks toward the satiric, laughing at the student, or do they share and laugh with the student? In the classrooms observed, two of the teachers had encounters with what they called their trouble-makers which bordered on the satiric and critical, even though

they taught the first grade and kindergarten. The fifth grade teacher lacked a strong sense of humor or sense of curiosity (she stated to the observer that she would soon receive her pension, and spent her lunch hour discussing retirement with several other older teachers) but did not threaten ridicule as the first and kindergarten teachers did.

Another important phenomena to observe in conducting playful curricular inquiry, are the patterns of congregation in the classroom. What do students do during the day? Do they remain seated the entire day or may they move freely about? In the classrooms observed, several kinds of patterns of congregation were observed. In the sixth grade room, sharing and cooperation were actively discouraged. Students were grouped for math and reading, and were free to leave their seats, take up a little rug (the teacher had provided several of these) and sit on the floor where they might choose during their study time--provided they isolated themselves from the rest of the students! In the reading lab, all the students sat at a single round table and worked from there, either with the teacher or individually. In the first grade, students could go to the pencil sharpener at will, though the teacher instructed them in how to walk there. Needless to say, since they were otherwise restricted in their movements, they congregated frequently at the pencil sharpener. In the kindergarten, the pattern of congregation during lessons was rigid, with children assigned to groups, and groups assigned

to an area. Every seventeen minutes a timer rang and each group moved to the next area. No matter what they were engaged in, at the sound of the timer, the children sprang from their seats and marched to their next station. Patterns of congregation in the kindergarten differed drastically from this during their playtime. Then groups formed because students were special friends (three girls played 'dogs' together) or because of a common interest in some plaything (like the 'train' mentioned earlier). The students were not permitted flexibility of movement except during recess or kindergarten playtime. Each class had prescribed routines for lining up, getting their coats, walking in the hall. The routines were inflexible and rigidly enforced. This is not to say that such discipline and attention to routine is altogether bad. However, it is so much in evidence within school procedures, that students can become one-sided. That is, they learn to follow sets of rules and routines, but they do not gain experience in choosing rules, setting routines nor in matching behaviors with new experiences.

Of further interest to the playful curricular inquiry is the degreee of convergence or divergence of activities in the classroom. Does everyone read from the same book, one at a time, out loud and thus at the same pace, as was observed in the fifth grade science lesson? Or are individual interests encouraged, as during library time in the sixth grade, when the only caveat was READ SOMETHING.

Playful curricular inquiry requires an educational imagination (Eisner, 1980) in its attempt to get at the students life world. In modern classrooms, play is eased out of the classroom and often actively discouraged. Portrayals of classrooms can help to see that just as chaos is an unproductive state, so can over-regulation and devaluation of play and creativity be so. Irony is another tool for curricular inquiry (Hamilton, 1979). The playful outlook or stance of the observer is at odds with the 'serious' outlook of most classroom time. Irony can be a detector of reifications of absurdities and for inconsistencies between philosophy or intention and actual behavior. At one of the schools in which classrooms were observed, there was a strong press for achievement, as evidenced by several school-wide policies. For one thing, all students were to read out loud at home to someone, be it mother, father, sister, brother, etc. and for another, teachers volunteered their after class time to staff a tutoring center which students were encouraged to attend. Great enthusiasm for learning was expressed everywhere. However, on every occasion that the observer arrived at the school, teachers ,the assistant principal and the principal remarked that it would be so boring to observe, that they didn't see how the observer could stay awake. It seems that unreflectively, they understand the crushing boredom fixed routine and regimentation can yield, yet they do not seem to realize this as a potential indictment of the education they provide for the students.

The manifestation of creative thinking in humor, science, and art has been discussed and four stages of creativity proposed (the preparation, incubation, illumination and verification stages). The role of play in these four stages varies. Play is crucial to certain stages and unimportant in others. In the preparation stage, associational thinking and rationality are of greater importance than bisociational thinking. However, as logical and systematic efforts fail to yield results, the incubation stage is reached. In this stage, also called the frustration stage, play is important. The logical approach is abandoned, and ideas are toyed with and finally 'put out of mind'. The thoughts simmer on the mind's back burner. It is at this stage that a spirit of playfulness reduces frustration and enables an individual to work more intensely and for a longer time on the problem. As Webb & Weick (1979) note:

> Foolish interludes generate novel inputs and permit people to recognize and break the singular focus toward a problem in which they had persisted. Foolish interludes disconfirm assumptions thereby creating interest, put distance between the observer and the phenomenon sustain morale, recruit interest in the topic, aid retention, facilitate the content and process of free association, expose assumptions, forestall criticism that degenerates into cynicism, offset the preoccupation with rational models... and insert topics into inquiry...that wouldn't be acknowledged or accepted if introduced in a more straightfoward manner. (p. 653)

Foolish interludes are characterized by recombining ideas, words, concepts, etc., free association, flexibility, humor, undominated discourse and high energy levels in participants.

Recombination is basic to the process of bisociation. In a way it is the essence of bisociation. In the classrooms, recombination activities were not often observed. Such activities might consist of interdisciplinary lessons which would give students a chance to integrate their personal and intellectual knowledge, as well as going beyond the limits of the imposed logic of the discipline noted earlier (Feyerabend, 1975). Open-ended assignments where students are directed to recombine givens to produce unspecified 'products' would also encourage play with ideas, words, concepts, etc. before producing a finished product. In the classrooms observed, assignments were close-ended; students were told to 'work' on assignments in which convergent thinking was reinforced. That is, the assignments had a single right answer. This kind of assignment develops linear, logical thinking at the expense of more expansive, intuitive creative thinking. A single exception to the rule occurred in the sixth grade during an English lesson. The students read a brief mystery story up to its resolution. Instead of reading the end of the story, the teacher had the students tell what they would do in that situation. Each student was asked, students debated the best solution, discussed all aspects of the story and could bring personal knowledge into their arguments. After thirty four minutes, the teacher had them read the ending. During that lesson, there was no right answer, nor any set boundaries to the knowledge they might bring to bear on the problem. The process of bisociation was at work to produce creative solutions, rather

than association, which produces a right answer.

Free association, usually a verbal playfulness, whether used in language arts or other classes, aids in recombination, relieves tensions, and fosters creative insight. In the classes observed, little free association was evident. During playtime, the kindergarteners exhibited signs of free association in their make believe games. They transformed themselves from trains to police to the Dukes of Hazard, though they continued to manifest the same behavior e.g. playing with wooden cars. The transformations were spontaneous, like free association, and as they came to their minds, they acted out their thoughts. In the other classes, such free association was usually regarded as a form of inattention to the work; the teacher would admonish the child or children to 'get back to work' or to pay attention.

Flexibility and humor are other play elements of creative thinking. In the classrooms observed, assignments were predetermined by the teachers, limiting flexibility of action and thought for the children. In one assignment, students were free to color their worksheets, but only after they had completed a matching exercise which was convergent. In another, they had to use colors dictated by the teacher. The students experienced little flexibility of movement, time or thought.

Although the amount of humor which was permitted or existed

in classrooms varied with the teacher's personality and orientation, the overall milieu of school discourages humor in favor of seriousness; play in favor of work. From the research evidence, it seems a more even balance of play and work, humor and seriousness , might reduce frustration in learning new skills, such as reading, and lead to discovery learning situations which lead to greater retention of learning (Bruner, 1976).

Undominated discourse refers to discourse between actors which is free of the influence of their respective roles (Habermas, 1975). Obviously, it is an ideal, as the nature of communication is such that gestures, roles, emotions; context, as it were, influences discourse. However, as the ideal is approached, and playfulness is a primary equalizer of dominated discourse, the creative process is less constrained. A teacher may always command students in school settings. "Sit down", "Be quiet", "Turn arond", "Line up", "Get to work", "Stop it", "Do this now", "Put that away" are only a few of the commands that issue from teachers to students. The unidimensionality of direction of the commands signifies a condition of dominated discourse. Only in play may a student turn about and issue a command to a teacher, and then only to some teachers, under certain circumstances. If a student commands a teacher in anger, the result is generally some form of punishment. In classroom discussions, the result of the distorted discourse is that students do not speak freely, may not use certain assertive techniques for putting forth their

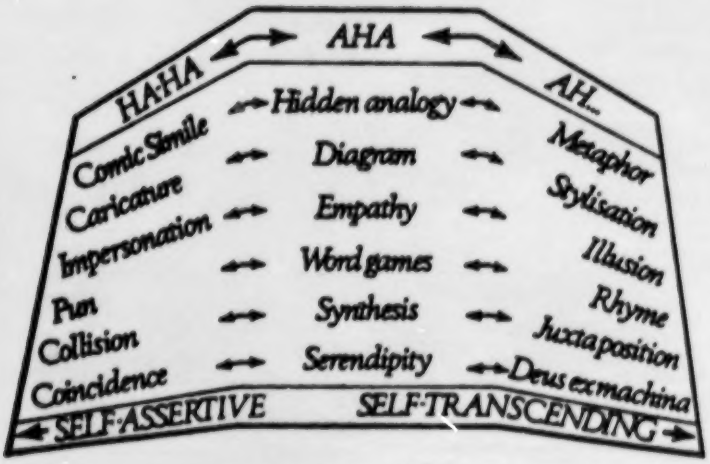
ideas, and defer unconsciously to the teacher, right or wrong. Students who do not acknowledge teacher domination are labeled trouble-makers or behavior problems. How many creative ideas have remained unspoken and unheard because their originator could not express them freely without undue constraint? This is not to say that limits or roles are useless, pernicious or unnecessary. However, just as students are now trained to follow rules, respect roles and defer, they might also be trained to break rules, step out of roles, and assert their ideas when they need to think creatively. Again, the idea of meta-communication arises. Students might be taught to signal 'This is creative thinking' just as they signal 'This is play'. Schools emphasize industry at the expense of leisure, regular habits at the expense of fresh initiative. Unrestricted free expression of ideas, as noted, is discouraged, in favor of routine thinking and moderation, but this serves to stifle creativity and breed conformity (Weiskopf, 1951). Schools provide ample time and development of the rational stages of the creative process, preparation and verification, but ignore the incubation or illumination stages. The suggestions in this paper could provide a rationale for incorporating foolish interludes, humor, flexibility, and the playful side of human nature into classrooms with a resultant stimulation of creative thinking in young people today.

Table 1

Play and Task-Oriented Behaviors

Prior training	Per cent spontaneous solution
Play with materials	39
Observation of complete solution	41
Observation of components of solution	17
Instructed manipulation of materials	20
No training	8

(from Bruner, 1976)



The three domains of creativity

Fig. 1

(from Koestler, 1978)

Fig. 2
An example of the HAHA reaction

Bibliography

Allport, G. The use of personal documents in psychological science. New York:Social Research Council, 1951.

Bowers, C. A. Educational critics and technocratic consciousness: Looking into the future through a rearview mirror. Teachers College Record, 1978, 80, (2), 272-286.

Bruner, J. S., Jolly, A. & Sylva, K. (Eds.) Play- Its role in development and evolution. New York: Basic Books, 1976.

Chambers, J. A. College teachers: Their effect on creativity of students. Journal of Educational Psychology. 1973, 65, (3), 326-334.

Eisner, E. The educational imagination. New York: MacMillan, 1979.

Feyerabend, P. Against method. London: Redwood Burn Limited Trowbridge & Esher, 1975.

Gadamer, H. Truth and method. New York: The Seabury Press, 1975, 91-119.

Habermas, J. Legitimation crisis. Translated by McCarthy, T. New York: Beacon Press, 1975.

Hamilton, D., MacDonald, B., King, C., Jenkins, D., Parlett, M., (Eds.) Beyond the numbers game: A reader in educational evaluation. Berkeley, California: McCutchan, 1977.

Huizinga, J. Homo ludens: A study of the play element of culture. Boston, Mass.: Beacon Press, 1955.

Hutchinson, E. D. How to think creatively. New York: Abingdon-Cokesbury, 1949, 237.

Koestler, A. Janus: A summing up. New York: Random House, 1978.

Lappe, F. M. & Collins, J. Food first. New York: Ballantine Books, 1979.

March, J. G. Technology of foolishness in March, J. G. & Olsen, J. P. Ambiguity and choice in orgnizations. Bergen, Norway: Universitetforlaget, 1976, 69-80.

Marcuse, H. The aesthetic dimension from Eros and civilization. Boston, Mass.: Beacon Press, 1955.

Millar, S. The psychology of play. New York: Aronson, 1974.

Schiller, F. Aesthetic and philosophical essays. Boston, Mass.: F. A. Nicholls, 1902.

Stein, M. I. & Heinze, S. J. Creativity and the individual. Glencoe, Illinois: The Free Press of Glencoe, 1964.

Vandenberg, B. Play as curriculum. Journal of Curriculum Theorizing. 1979, 1, (2), 229-237.

Wallas, G. The art of thought. New York: Harcourt Brace, 1926.

Webb, E. & Weick, K. E. Unobtrusive measures in organizational theory: A reminder. Administrative Science Quarterly. 1979, 24, 650-659.

Webb, E., Campbell, D. T., Schwartz, R. D. & Sechrest, L. Unobtrusive measures: Nonreactive research in the social sciences. Chicago, Illinois: Rand McNally, 1969.

Weisskopf, E. A. Some comments concerning the role of education in the 'creation of creation'. Journal of Educational Psychology. 1951, 42, 185-189.